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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,815	07/08/2005	Axel Gerlt	411000-136	6108
27162 7590 12/18/2007 CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI, STEWART & OLSTEIN 5 BECKER FARM ROAD ROSELAND, NJ 07068			EXAMINER WILSON, BRYAN E	
			ART UNIT 2891	PAPER NUMBER
			MAIL DATE 12/18/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

REPLACEMENT  
Office Action Summary

Application No.

10/541,815

Applicant(s)

GERLT ET AL.

Examiner

Bryan E. Wilson

Art Unit

2891

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-22 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 07 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :5/24/07, 10/31/05, 9/26/05, 7/8/05.

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 05/24/2007 has been considered except for citation number 143 which contains an incorrect document number.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 5-6, 8, 10-14, and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claims 2, 5-6, and 10-14, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For purposes of compact examination, the Examiner will apply the broadest reasonable interpretation to each claim in which "and/or" appears. In effect,

the Examiner will treat each of these claims as requiring one thing or the other from the included options.

7. The term "higher" in claims 8 and 19-22 is a relative term which renders the claim indefinite. The term "storage density" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purposes of compact examination, the Examiner will treat the claim as requiring that the memory unit in a matrix arrangement is at least capable achieving a storage density.

8. Claims 7-8, and 15-18 provides for the use of a memory unit, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 7-8, and 15-18 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

#### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bulovic '495 (Referenced as "WO 02/091495 A2" to Applicant Coatue Corporation in Applicant's Information Disclosure statement accepted on 07/08/2005).

a. Regarding claims 1 and 3, 4, 5, 9, 10, 11, Bulovic discloses a memory unit having a storage function composed substantially of organic material (see e.g. page 8 lines 8-27), comprising: an electrolyte (NaCl; see e.g. Fig. 2 and page 9 lines 1-2); and an organo-resistive material embedded in the electrolyte (active layer 22 is a conjugated chain; see e.g. Fig. 1a, Fig. 2 and pg. 7 lines 1-13 and page 8 lines 9-27) on a substrate (any of layers A, C, D, Insulator 1 or Insulator 2 may act as a substrate in the broadest reasonable interpretation of the claim). The Examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See, e.g., *In re Pearson*, 181 USPQ 641 (CCPA); *In re Minks*, 169 USPQ 120 (Bd Appeals); *In re Casey*, 152 USPQ 235 (CCPA 1967); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). See MPEP §2114. The recitation of "wherein the storage function of the unit results from the organo-resistive material being embedded in the electrolyte" does not distinguish the present invention over the prior art of Bulovic who teaches the structure as claimed. Regardless, the storage function of the memory cell of Bulovic results from the organo-resistive material being embedded in the electrolyte (see e.g. page 8 lines 8-27, page 9 line 1-25, Fig. 1a-d and Fig. 2).

b. Regarding claim 2, Bulovic discloses that the memory unit further includes a conductive material (see e.g. upper read electrode B in Fig. 2 and page 8 lines 20-27). The Examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See, e.g., *In re Pearson*, 181 USPQ 641 (CCPA); *In re Minks*, 169 USPQ 120 (Bd Appeals); *In re Casey*, 152 USPQ 235 (CCPA 1967); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). See MPEP §2114. The recitation of “so that the flow of ionic current through the electrolyte due to application of a voltage to the conductive material causes a readable change in the conductance or color of the organo-resistive material” does not distinguish the present invention over the prior art of Bulovic who teaches the structure as claimed. Regardless, Bulovic still discloses that application of a voltage to the conductive material causes a readable change in the conductance of the organo-resistive material (see page 8 lines 8-19).

c. Regarding claims 6, 12, 13, and 14, Bulovic further discloses that the organo-resistive material or a mixture of the organo and electrolyte materials are soluble. The examiner notes that all materials are soluble in some respect and the word “soluble” does not mean that the material must be completely dissolved in a solvent. The examiner notes that the language “can be processed in solution” does not require that the material is actually processed in solution, merely that is capable of doing so.

d. Regarding claims 7-8, and 15-22, Bulovic further discloses that the memory unit is provided in a matrix arrangement (see "memory cell array" and Fig. 3) between a ground potential and a supply voltage and comprises at least one resistor, an organo-resistive conductive element embedded in an electrolyte (the memory cell shown in Fig. 2) and a control electrode (any of C2, C4, R3 or R4 in e.g. Fig. 4; see also page 10 lines 3-23). The examiner notes that Bulovic includes at least two electrodes in the memory cell of Fig. 2 and in the memory cell array of Fig. 3 includes rows and columns to address each cell with a current, therefore this array must be a circuit. Also, Bulovic states "the cell resistance" (see page 10 line 12) in reference to a memory cell in the memory cell array, so there must at least be one resistor that is disclosed by Bulovic. Further if there is a "resistance" there must at least be a supply voltage across this resistance and therefore opposite to this supply voltage, there must also be a relative ground potential disclosed in Bulovic.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan E. Wilson whose telephone number is (571) 270-1568. The examiner can normally be reached on Monday through Friday 8:00am-4:30pm E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571)272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BW  
12/10/2007



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